

# Marine Environmental Update

Volume FY92 Number 2

June 1992

## EPA Updates Water Regulatory Actions

In June, a rule will be issued requiring states to provide EPA with lists of sources requiring accelerated control measures under the Clean Water act, sections 303 (d)/304 (1) regulations proposal. The categories include areas of water quality-limited bodies of water, identification of bodies of water targeted for control measures, and lists of additional point sources and pollution concentrations. For more information on the accelerated control measures, contact Don Brady at (202) 260-5368.

In September, a draft clarifying the treatment of dredged and other material before dumping into the ocean will be published. For further information on the dredged material/ocean dumping proposal, contact: John Lishman, (202) 260-8488.

OMB has begun reviewing dumping sites and the way in which they are listed in the Code of Federal Regulations. The review includes the elimination of sites listed which lie landward of the baseline of the territorial sea, and corrections of any technical errors within the listing of sites. The review started in May. For more information, contact Susan Hitch: (202) 260-9178.

The EPA and the National Oceanic and Atmospheric Administration are reviewing non-point source pollution reduction guidelines. The guidelines are proposed under

the authority of Section 6217 (g) of the Coastal Zone Act Reauthorization Amendments of 1990. Special attention to technology based management measures are being considered. Categories for reduction include (but are not limited to) pollution from construction, stormwater, and agricultural runoff. The proposed guidelines are important because it will serve as a basis for each coastal state to develop a coastal non-point source pollution control program. In addition, it will require that, as a minimum,

all coastal non-point source pollution control programs must use the guidelines. The final set of guidelines will be published sometime in October. Questions on the proposal are being reviewed by Steve Dressing at Assessment and Watershed Protection Division (WH-533), USEPA, 401 M Street SW, Washington, D.C. 20460, (202) 260-7085.

The Coastal Zone Management Act is developing a program for guidance. This program will aid states in coordinating the

regulations of non-point source pollution programs with the Environmental Protection Agency. Comments are being reviewed by Steve Dressing at (202) 260-7085.

--*National Environment Watch*. Vol.3 No.1. April 20, 1992.

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### • IN THIS ISSUE •

- ✓ EPA Regulatory Action Updates
- ✓ Sediment Contamination Criteria Under Review
- ✓ Stormwater Permit Regulation Update
- ✓ Portsmouth NSY Risk Assessment
- ✓ Remote Oil Sensing Techniques
- ✓ Dealing With Regulatory Agencies
- ✓ Environmental Science At NRaD
- ✓ Oceans Foundation Recognizes NRaD Scientist



## Criteria for Sediment Contamination Under Review

The EPA's science advisory board reviewed five proposed criteria for sediment contamination limits. The criteria set specific limits for sediments using chemical criteria, toxicity bioassays, and bioaccumulation tests. The five chemicals to be regulated are acenaphthene, dieldrin, endrin, fluoranthene, and phenanthrene. The U.S. Army Corps of Engineers found the current EPA guidelines to be deficient and asked for further review of the criteria. The EPA held a series of meetings to review the proposed contamination limits (results can be obtained from the address below). On June 16, the Agency will seek recommendations for development of a public awareness program. All correspondence regarding the proposed management strategy (including the proposed contamination limits and public awareness program) should be addressed to Elizabeth Southerland, US EPA Office of Water (WH-585), 401 M Street SW, Washington, D.C. 20460. Information on the technical content of the forum can be obtained from Tim Kasten at USEPA Office of Water (WH-585), 401 M Street SW, Washington, D.C. 20460, (202) 260-5994.

--*Environment Reporter*. Vol.23 No.2. May 8, 1992. p.273.

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## Update On Stormwater Permit Regulation

Stormwater Monitoring and Permit Regulation has been updated by the Environmental Protection Agency (EPA). Under the new rule, industrial facilities will be able to satisfy stormwater monitoring standards by performing annual rather than continuous monitoring. This change provides facilities a more efficient and cost effective way of monitoring and evaluating discharges. The applicant will have to comply with standards set out in a general permit. The permit states that facilities will have to monitor their discharges for eight pollutants,

although some facilities may have additional monitoring requirements. The regulations define "stormwater associated with industrial activity" as discharges arising from activities and facilities associated with manufacturing, hazardous waste, mining, storage or disposal, landfill or dumps, recycling, power generation, transportation (including vehicle maintenance, and airports), ship building, wastewater treatment, and any construction projects larger than five acres. The document requires facilities to register a Notice Of Intent (NOI) with the EPA before implementation. The NOI requires no formal applications but should include "The legal name and address of the owner or operator, the facility name and address, type of facility or discharges, and the receiving stream(s)." While no specific deadline was established, 60 days prior to the initial date of coverage was set as a preference for the NOI. Dischargers who fail to file the NOI with the EPA will be in violation of the Clean Water Act and the state Water Code.

--*Environment Reporter*, Vol. 22, No. 49, April 3, 1992.

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## Portsmouth Naval Shipyard Estuarine Ecological Risk Assessment

The Marine Environmental Support Office (MESO) is directing a research and monitoring project sponsored by Northern Division (Naval Facilities Engineering Command) to provide a framework for assessing the ecological risk from operations at Portsmouth Naval Shipyard (Kittery, ME). The ecological risk assessment framework consists of quantitatively estimating the likelihood of adverse ecological effects to the estuary resulting from exposure to hazardous waste releases at the adjacent shipyard. The project, initiated in August 1991, involves a detailed assessment of the existing environmental quality in lower Piscataqua Estuary to determine if contamination from the shipyard can be linked to measurable environmental impacts. The effect of shipyard contaminants on the estuary is being determined by comparing measures of contamination and biological



impact made at sites in the immediate vicinity of Portsmouth NSY with similar measures made at reference sites in the estuary. The information developed from the study will provide a context for evaluating ecological risks from shipyard operations.

A network of 34 stations has been established to develop information on the distribution and effects of contaminants from the shipyard. The main emphasis is on sampling in depositional areas of the estuary, where fine grain sediments accumulate, and where the likelihood of measuring contamination is maximized. An extensive sampling grid, circumnavigating Seavey Island and extending into the Clark Island Embayment, was located to provide samples for measuring sediment chemistry and toxicity, and collections of mussels, eelgrasses, and benthic organisms. Other stations, located upstream, downstream, and across-stream from the shipyard and in the York River were established to provide information on the possible extent of contamination from the shipyard, other sources of contamination in the Estuary, and background reference levels of contamination. In addition to these stations, fishing net trawls were conducted in the Piscataqua River Estuary and in the York River, to obtain fish and lobster samples for analysis of contaminant burdens.

The study is being conducted as a cooperative research project between the Naval Command, Control and Ocean Surveillance Center Research, Development, Testing and Evaluation Division (NCCOSC RDTE DIV), the Environmental Protection Agency Environmental Research Laboratory, Narragansett and the University of New Hampshire Jackson Estuarine Laboratory. Field sampling for the first phase of the project has been completed and the compilation and analysis of the results obtained from the physical, geological, chemical, biological, and toxicological tests is underway.

In July 1992, Ken Richter and Bart Chadwick, scientists at NCCOSC RDTE DIV, will head up a team of researchers from the Marine Environment Branch in support of the risk assessment work. The RV ECOS

outfitted with the MESC and ADCP current profiling system will be used to make measurements of current velocities, total suspended load, hydrodynamic, and water quality parameters in the estuary. Data collected at a series of transects across the Piscataqua River will be used to help validate a circulation/dispersion model for the estuary being run by scientists at the University of New Hampshire. Axial transects will also be made to help identify the extent of the strong tidal excursions found in the estuary.

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## **Remote Sensing Techniques to Detect and Identify Oil in the Marine Environment**

In response to recent political pressure to protect the natural marine environment, researchers at the Office of Naval Research have been developing practical means of remote sensing to evaluate environmental impacts of oil. With the use of cameras, spectrometers, scanners, laser-fluorescence systems, and various electromagnetic radiation devices, oil can be detected in the marine environment. Spectral data from short (UV) to very long (microwave) wavelengths have been useful in detecting oil on the surface of the ocean.

Members of the marine, petroleum, and environmental industries have joined together to form the GEOSAT Committee. Their goal is to determine how best to use remote sensing technology in order to address offshore problems and regulate various operations of marine organizations. Currently, the GEOSAT participants are engaged in a 2- to 5-year study which will compare sea surface spectra from satellites (ERS-1, Radarsat, SEASAT, Shuttle Imaging Radar, and others) with water column, sea surface, and sea floor measurements from instrumented platforms to identify oil within the marine environment. The potential correlation of satellite-collected sea surface spectra, oil seeps, and marine geology will enable scientists to extend these techniques



into less fully understood test sites and eventually into remote areas worldwide.

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## Dealing Peacefully With Regulatory Agencies

With the myriad of federal, state, and local environmental laws and regulations, it has been necessary to interact with regulatory agencies and the public on a more frequent basis. When finding adequate solutions, it is better to interact on a friendly, cooperative level rather than an adversary level. The following is a summary of two articles which address these concerns and can provide a valuable guide to cooperating with regulatory agencies.

Two important aspects of dealing with regulators are preparation and control. Preparation involves identifying all issues and mapping out strategies. Important issues must be anticipated and given a plan to insure their success. With preparation, it is possible to maintain control over the regulatory process, maintain input, and achieve the desired result on favorable terms. Control creates the atmosphere which lets the regulatee advise the agency of its intentions and seeks the agency's approval rather than having the terms dictated to them. After a level of cooperation is established, the next important thing for the regulatory process is the actual application for the permit.

Permit application is often time consuming and frustrating but it is critical for the success of many projects. Permit processes are very complex, but can be broken down into four separate areas: (1) Regulatory review, (2) Technical review, (3) Due process available to the applicant, and (4) Due process rights available to the public. In order to deal more adequately with the agency and progress through the regulatory process, the following suggestions are offered. Effective communication is always necessary for the willing cooperation of all parties involved. Two way communication must be accompanied

with two way approval. Competition should not be part of the process. It is necessary for both parties involved to work together and share information. Have a single point person for both sides who knows the viable compromises that his or her agency is willing to take as well as the critical no-compromise issues. Be prepared to respond to the public, the press and the law. Hearings, civil suits, and legal review are almost always part of the permit process. Have competent legal counsel available and be aware of all your rights. It is important to realize that agencies have their share of office politics and internal problems. These are as simple as budget limitations and as complex as personal differences of opinion. Finally, state and local agencies are constantly trying to keep up with the laws and statutes within their community. It is a difficult job to coordinate their efforts with policies and keep all parties involved pleased with the results.

The regulatory agency can arrive at a viable solution in which all involved parties are satisfied by following some of the simple suggestions described here. For a better understanding on dealing with regulatory agencies and more suggestions, consult the *Journal of Environmental Regulation*, Volume I Number 1, Autumn 1991, and "Practical Guide to Environmental Management" by Frank B. Friedman, Environmental Law Institute 1991.

In the next issue of *Marine Environmental Update*: How to deal with the press and public on environmental issues.

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## Environmental Science Research and Development at NRaD

The Environmental Sciences Division of NRaD, the Naval Command Control & Ocean Surveillance Center, Research Development Testing & Evaluation Division (formerly NOSC, the Naval Ocean Systems Center) is a candidate Navy Center of Excellence for marine environmental quality assessment and technology. The



division has three main goals: (1) To maintain and expand a state-of-the-science capability in environmental sensors, environmental biotechnology, instrumentation and analytical methods development; (2) To maintain a marine environmental assessment, survey and monitoring capability; (3) To provide technology and expertise in non-acoustic surveillance including radiation sensors and bioluminescence.

Environmental quality assessment refers to predicting, assessing, and minimizing the effects of fleet and facility activities on the environment with a related objective being the reduction of impact that environmental restrictions have on Navy operations.

The division operates within a 52,000 square foot Ocean Sciences Laboratory with fully equipped chemistry, biology, biotechnology, instrumentation, electronics and computer labs. A fully integrated Marine Environmental Survey Capability incorporating a number of NRaD-developed sensors is available to rapidly map physical, chemical and biological parameters in harbors and estuaries. Some of the ongoing programs include:

- Shipboard Effluents
- Benthic Contaminant Flux Sampling Device
- San Diego Bay Risk Assessment/Hydrodynamic Modeling
- Organics Analysis/Portable PCB Detector
- Improved Anti-Fouling Coatings
- Slurry Bioremediation (BioReactors)
- Stress Protein Biomarkers
- Fiber Optic Chemical Sensors for Site Investigations
- Copper Speciation and Ion-Specific Electrode
- Bioluminescence in Biomonitoring of Effluents
- Portable Lead Analyzer

For further detailed information on environmental quality programs at NRaD, see the enclosed brochure. **[NOTE: BROCHURE NOT INCLUDED -Editor]**

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## **NRaD Environmental Scientist Recognized by the Oceans Foundation**

Peter Seligman, head of Environmental Sciences Division at NRaD was awarded the Roger Revelle Perpetual Award for his research in assessing the ecological risks of organotin paints by the San Diego Oceans Foundation. The Oceans Foundation is dedicated to protecting the ocean and its resources while peacefully coexisting with man. Organotin-based paints have been useful in reducing fouling-induced drag on boats, however, concerns have arisen regarding possible adverse effects to the flora and fauna of the marine environment. Mr. Seligman has gained worldwide recognition for his efforts supporting the Navy's investigations into the safe and effective use of organotin-based antifouling coatings.

The Revelle Award is annually given to "a San Diegan who has made a significant contribution to man's ability to coexist with the marine environment. It is intended for those who take the initiative to resolve ocean issues and encourage stewardship of the ocean resources." Mr. Seligman was presented the Revelle Award on June 12 at the Foundation's Oceans '92 dinner.

**Forward comments or questions about this newsletter to:**

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